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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/587,612	06/05/2000	Satoru Furuta	192324US2	8855
22850	7590	02/02/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			MICHALSKI, JUSTIN I	
			ART UNIT	PAPER NUMBER
			2644	

DATE MAILED: 02/02/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/587,612

Applicant(s)

FURUTA, SATORU

Examiner

Justin Michalski

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11/03/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-24 is/are allowed.
- 6) ☒ Claim(s) 25 and 35 is/are rejected.
- 7) ☒ Claim(s) 26-34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi (US Patent 6,044,341) in view of Chandran et al. (US Patent 6,591,234). Takahashi et al. discloses a noise suppression device (Figure 8) for suppressing noise other than an objective signal contained in an input signal, comprising: means for controlling a first perceptual weight (subtraction coefficient setting unit 43) according to the input signal and means for performing a spectral subtraction (amplitude spectrum subtractor 34) using said controlled first perceptual weight (coefficient sc, Column 11, lines 1-2) for performing spectral subtraction (Column 11, lines 33-43). Takahashi does not disclose a second perceptual weight for controlling an amplitude spectrum of the input signal. Chandran et al. discloses a noise suppression device (Figure 2) with a perceptual weight (output of 114 to gain computation 208) for controlling spectral amplitude suppression of an input signal (Paragraph bridging columns 1 and 2).

Chandran et al. teaches that after the attenuation process the resulting output signal will have an improved overall perceived quality (Column 2, lines 12-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a second perceptual weight for controlling a spectral amplitude suppression to achieve an improved overall perceived quality signal.

4. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi (US Patent 6,044,341) in view of Chandran et al. (US Patent 6,591,234). Takahashi et al. discloses a noise suppression method (Figure 8) for suppressing noise other than an objective signal contained in an input signal, comprising the steps of: controlling a first perceptual weight (subtraction coefficient setting unit 43) according to the input signal and means for performing a spectral subtraction (amplitude spectrum subtractor 34) using said controlled first perceptual weight (coefficient sc) (Column 11, lines 1-2) for performing spectral subtraction (Column 11, lines 33-43). Takahashi does not disclose a second perceptual weight for controlling an amplitude spectrum of the input signal. Chandran et al. discloses a noise suppression device (Figure 2) with a perceptual weight (output of 114 to gain computation 208) for controlling spectral amplitude suppression of an input signal (Paragraph bridging columns 1 and 2). Chandran et al. teaches that after the attenuation process the resulting output signal will have an improved overall perceived quality (Column 2, lines 12-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made

to include a second perceptual weight for controlling a spectral amplitude suppression to achieve an improved overall perceived quality signal.

***Response to Arguments***

5. Applicant's arguments, see pages 14-16, filed 11/03/2003, with respect to rejection of claims 1-10 have been fully considered and are persuasive. The rejection of claims 1-10 has been withdrawn.

***Allowable Subject Matter***

6. Claims 1-24 are allowed.

7. Claims 26-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

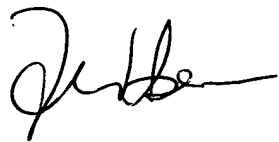
**Conclusion**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Michalski whose telephone number is (703)305-5598. The examiner can normally be reached on 8 Hours, 5 day/week.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Isen can be reached on (703)305-4386. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

JIM



SPE, AU 2644